

PATENT APPLICATION

SODA BOTTLE CONFECTIONERY

CROSS-REFERENCE TO RELATED APPLICATIONS

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This application is a continuation-in-part application of U.S. Patent Application Serial No. 09/874,440, entitled "Soda Bottle Confectionery", to Sciarini, filed on June 4, 2001, and the specification thereof is incorporated herein by reference.

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This application is related to U.S. Utility Patent Applications entitled; "Confectionery With Body, Handle and Container," Attorney Docket No. 30687-11; "Soda Bottle Confectionery With Open Top," Attorney Docket No. 30687-18; and "Self-Sealing Cap," Attorney Docket No. 30687-19; and to U.S. Design Patent Applications entitled "Alien Head for Confectionery Product," Attorney Docket No. 30687-12; "Alien Head for Confectionery Product," Attorney Docket No. 30687-13; "Alien Head for Confectionery Product," Attorney Docket No. 30687-14; "Alien Head for Confectionery Product," Attorney Docket No. 30687-15; and "Alien Body for Confectionery Product," Attorney Docket No. 30687-16, all of which are filed concurrently on even date herewith, and the specifications and drawings thereof are incorporated herein by reference.

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BACKGROUND OF THE INVENTION

Field of the Invention (Technical Field):

The present invention relates to a soda bottle shaped confectionery.

Background Art:

The confectionery industry uses a variety of tools or utensils to facilitate extraction of a candy material from a reservoir. For instance, the following design patents disclose candy dipping tools: U.S. Patent No. Des. 264,298, entitled "Candy Dipping Tool," to Guttman, issued May 11, 1982, discloses a candy dipping tool with an elongated handle and a loop end; U.S. Patent No. Des. 264,169, entitled "Candy Dipping Tool," to Guttman, issued May 4, 1982, discloses a candy dipping tool having an elongated handle and a forked end comprising two prongs; and U.S. Patent No. Des. 264,038, entitled "Candy Dipping Tool," to Guttman, issued April 27, 1982, discloses a candy dipping tool having an elongated handle and a spiral end for candy dipping. Another patent, U.S. Patent No. 2,281,267, entitled "Eating Utensil," to Chapman, issued April 28, 1942, discloses eating utensils wherein the food-holding portion of the eating utensil contains a layer of edible flavored material.

The dipping of a foodstuff directly into another foodstuff is relatively common practice in food manufacturing, food service, and amongst consumers in general. The following patents disclose matter germane to these practices:

U.S. Patent No. 5,676,990, entitled "Method of Food Article Dipping and Whipping in a Condiment Container," to Wawrzynski, issued October 14, 1997, discloses a method for removing excess condiment from a food article. The method has three steps: manipulating, inserting and removing. In the first step, manipulating, a slit is formed in a container containing the condiment. In the next step, inserting, the food article is inserted through the slit into the condiment container. The final step entails removing the food article from the container. As the food article is removed from the container, excess condiment is stripped off the food article as it passes through the slit.

U.S. Patent No. 3,312,555, entitled "Handle-Anchored Formed Sugar Block and Method of Producing Same," to Rossi et al., issued April 4, 1967, discloses a handle-anchored formed sugar block for stirring a beverage in a container. The purpose of the apparatus is to sugar-sweeten beverages.

5 U.S. Patent No. 1,718,997 entitled "Frozen Confection," to Burt, issued July 2, 1929, discloses a frozen confection substantially in the shape of a rectangular block attached to a stick handle. The confection may contain an edible shell composed of any suitable material such as chocolate, which will provide a relatively hard outer surface at normal temperatures. When chocolate is used, the frozen body portion is preferably dipped in the heated chocolate in substantially the same way that other candies and
10 confections are dipped.

U.S. Patent No. 5,370,884, entitled "Combination Sucker and Edible Powder," to Coleman, issued December 6, 1994, discloses a confectionery apparatus having a top plastic cap for housing a hard candy sucker and a lower plastic container for housing a powder or granular candy. After removing
15 the top cap, the hard candy is moistened and then dipped into the powder or granular candy. A similar product is marketed by The Topps Company, Inc., under the name "Baby Bottle Pop™".

U.S. Patent No. 3,840,678, entitled "Edible Spooning Device," to Price, issued October 8, 1974, discloses an edible product having food receiving cavities for spooning and consuming foodstuff.

20 Confectioneries having a shape of a non-edible are disclosed in the following patents: U.S. Patent No. Des. 269,559, entitled "Confection on a Stick," to Sellares, issued July 5, 1983, discloses a confection on a stick shaped in the form a fist with an extended index finger; U.S. Patent No. Des. 260,045, entitled "Frozen Confection or Similar Article," to Frankel et al., issued August 4, 1981,
25 discloses a frozen confection or similar article that is in the shape of a foot; U.S. Patent No.

Des. 177,206, entitled "Confection," to Babcock, issued March 27, 1956, discloses a tube piece confection shaped substantially like a spoon wherein the spoon end portion comprises a confection; U.S. Patent No. Des. 92,473, entitled "Lollipop or Similar Article," to Keller, issued June 12, 1934, discloses a lollipop or similar article in the shape of a mug with over-flowing froth; U.S. Patent No. Des. 62,611, entitled "Hard Candy Confection," to Hochstraser, issued July 3, 1923, discloses a hard candy confection having the shape of a face; and U.S. Patent No. 16,030, entitled "Candy or Confection," to Schwarzschild and Greenfield, issued April 7, 1885, discloses a candy or confectionery in the shape of a broom wherein both the whisk and handle portion comprise the confectionery.

Food products, comprising multiple foodstuffs, having at least one discrete compartment that allows for or facilitates mixing are disclosed in the following patents:

U.S. Patent No. 3,413,128, entitled "Bottle," to Steinbarth et al., issued November 26, 1968, discloses a bottle having two container portions. One container is designed to hold a liquid, such as an alcoholic beverage, while the other container is designed to hold a granular solid, such as salt.

U.S. Patent No. 1,889,882, entitled "Container for Food Products," to Woods, issued December 6, 1932, discloses a container for food products that has at least two sections. The sections hold different food products and can be opened to allow co-mingling of the different food products.

U.S. Patent No. 1,983,685, entitled "Receptacle for Food Products," to Townsley, issued December 11, 1934, discloses a receptacle for holding food products having a main bag portion and an auxiliary compartment. The auxiliary compartment is designed to contain a dry flavoring material. The auxiliary compartment may be opened such that the material contained within that compartment mixes with the material in the main bag portion.

U.S. Patent No. 2,647,681, entitled "Seasoning Dispenser," to Paoli, issued August 4, 1953, discloses a package for bulk food such as potatoes or popcorn having a separate compartment for seasoning.

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U.S. Patent No. 2,824,010, entitled "Flavor-Containing Milk Container Top," to Pedersen, issued February 18, 1958, discloses a flavor-containing milk container top that affixes to a glass milk bottle, plastic milk bottle, or a carton milk container. The flavoring ingredients are released from the receptacle in the milk container top such that they mix with the milk.

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Non-food products, having multiple components, having at least one discrete compartment that allows for or facilitates mixing are disclosed in the following patents:

U.S. Patent No. 2,832,981, entitled "Device for Applying Liquid Adhesive or the Like," to Breuhan, issued May 6, 1958, discloses a flexible-bodied container for liquid adhesive paint. The device also has a brush that can be in either an inverted or extended position. In the extended position, liquid from the container flows through the bristles of the brush for application. In the inverted position, the brush is in contact with the liquid in the container or the gaseous environment created by the liquid in the container such that the bristles do not harden.

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U.S. Patent No. 3,386,792, entitled "Paint Kit," to Ireland, issued June 4, 1968, discloses a device with a paintbrush and an integral container for paint. The paint container is housed in the end one end of the device while the paintbrush is positioned at the other end.

None of these references disclose a confectionery in the shape of a soda bottle wherein the top attaches to the bottom, and a candy extends into the bottom into a flowable confectionery.

SUMMARY OF THE INVENTION (DISCLOSURE OF THE INVENTION)

5 The present invention is of a confectionery comprising: a bottle shaped container comprising an upper portion and a lower portion, the upper and lower portions removeably attachable to each other; and the upper portion including a solid edible candy disposed thereon extending downward from the upper portion into the lower portion when the upper and lower portions are attached. In the preferred embodiment, the upper portion comprises a top half of the bottle shaped container and the top half includes an integral cap. The lower portion comprises a bottom of the bottle shape. The upper portion further comprises an insert for attachment of the stem, wherein the insert is removeably insertable into the upper portion. A lower edge of the upper portion engages with an upper edge of the lower portion for releasable attachment of the upper portion to the lower portion. The upper portion attaches to the lower portion by twisting, wherein at least one of the upper portion and the lower portion comprise a correlating set of ridges and grooves or a set of mating twist attachment elements. The confectionery set preferably further comprises corresponding notches. The lower portion further includes a flowable confectionery therein, wherein the edible candy is when wetted is coatable when dipped into the flowable confectionery and extractable from the lower portion. The flowable confectionery comprises at least one of sugar-based and artificial sweetener-based confectionery, such as sugar, organic acid, flavor agent, color agent, and/or flow agent. The flow agent comprises at least one of powdered cellulose, magnesium stearate, stearic acid, paraffin and microcrystalline waxes, polyethylene waxes, mineral and other lubricating oils, talc, silicone dioxide, lactose, and calcium citrate. In alternative embodiments, the flowable confectionery comprises a luminiferous confectionery, gas-generating or gas-releasing confectionery, or a fluid (preferably having viscoelastic rheological properties). At least one of the upper and lower portions comprises a rigid material, such as plastic, glass, wood, and metal. The edible candy preferably comprises at least one of sugar, corn syrup, water, flavor agent and color agent.

The present invention is also of a confectionery comprising: a bottle shaped container comprising an upper reservoir and a lower reservoir, the upper and lower reservoirs releasably attachable to each other; the upper reservoir including a stem and an edible candy disposed thereon extending downward from the upper reservoir into the lower portion; and wherein the lower reservoir includes a flowable confectionery. In the preferred embodiment, at least one of the upper and lower reservoirs comprises a set of mating twist attachment elements.

The present invention is additionally of a confectionery comprising: a bottle shaped plastic container comprising a top half and a bottom half, the top half selectively releasably connected to the bottom half; the top half including a stem and a hard candy molded on the stem and extending down into the bottom half; and a flowable confectionery disposed within the bottom half; whereby the hard candy may be wetted, dipped into the flowable confectionery and coated so as to extract the flowable confectionery for consumption. In the preferred embodiment, the upper portion and the lower portion twist relative to each other for twist attachment. At least one of the upper portion and the lower portion comprise a set of ridges and grooves for twist attachment.

The present invention is still further of a confectionery set comprising: a bottle shape comprising an upper portion and a lower portion, the upper and lower portions removeably attachable to each other; and the upper portion comprising a stem and an edible candy disposed thereon extending downward from the upper portion in the lower portion. In the preferred embodiment, the upper portion comprises a top of the bottle shape and the top comprises an integral cap. The lower portion comprises a bottom of the bottle shape. The upper portion further comprises an insert for attachment of the stem, wherein the insert is removeably insertable into the upper portion. A perimeter of the upper portion engages with a perimeter of the lower portion for attachment of the upper portion to the lower portion. The upper portion

attaches to the lower portion by twisting, wherein at least one of the upper portion and the lower portion comprise a correlating set of ridges and grooves. The confectionery set preferably further comprises corresponding notches. The lower portion further comprises a flowable confectionery disposed therein, wherein the edible candy is coatable by the flowable confectionery and extractable by the coatable body portion. he flowable confectionery comprises at least one of sugar-based and artificial sweetener-based confectionery, such as sugar, organic acid, flavor agent, color agent, and/or flow agent. The flow agent comprises at least one of powdered cellulose, magnesium stearate, stearic acid, paraffin and microcrystalline waxes, polyethylene waxes, mineral and other lubricating oils, talc, silicone dioxide, lactose, and calcium citrate. In alternative embodiments, the flowable confectionery comprises a luminiferous confectionery, gas-generating or gas-releasing confectionery, or a fluid (preferably having viscoelastic rheological properties). At least one of the upper and lower portions comprises a rigid material, such as plastic, glass, wood, and metal. The edible candy preferably comprises at least one of sugar, corn syrup, water, flavor agent and color agent.

The invention is also of a confectionery set comprising: a bottle shape comprising an upper portion and a lower portion, the upper and lower portions removeably attachable to each other; the upper portion comprising a stem and an edible candy disposed thereon extending downward from the upper portion in the lower portion; and wherein the upper portion and the lower portion twist relative to each other for twist attachment. In the preferred embodiment, a flowable confectionery is disposed within the container. At least one of the upper portion and the lower portion comprise a set of ridges and grooves for twist attachment.

The invention is additionally of a confectionery set comprising: a bottle shape comprising an upper portion and a lower portion, the upper and lower portions removeably attachable to each other; the upper portion comprising a stem and an item disposed thereon extending downward from the upper

portion into the lower portion; and a flowable confectionery disposed within the lower portion. The item may be edible or non-edible. In the preferred embodiment, the upper portion and the lower portion twist relative to each other for twist attachment. At least one of the upper portion and the lower portion comprise a set of ridges and grooves for twist attachment.

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The present invention is still further a confectionery comprising: a bottle shaped container comprising an upper portion and a lower portion, wherein the upper and lower portions are removeably attachable to each other; the upper portion includes a solid edible candy disposed thereon extending downward from the upper portion into the lower portion when the upper and lower portions are attached; and the upper portion attaches to the lower portion by twisting. At least one of the upper and lower portions may comprise a set of mating twist attachment elements comprising at least two correlating sets of ridges and grooves. The twist attachment elements may further comprise corresponding notches.

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The lower portion may include a flowable confectionery therein. The confectionery may comprise an edible candy that when wetted is coatable when dipped into the flowable confectionery and extractable from the lower portion. The flowable confectionery may be comprised of a member selected from the group consisting of sugar-based and artificial sweetener-based confectionery, which may include sugar, organic acid, flavor agent, color agent, and flow agent. The confectionery may additionally comprise a luminiferous confectionery or gas-generating and gas-releasing confectionery.

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The flowable confectionery may comprise a fluid. Such a fluid may comprise viscoelastic rheological properties. At least one of the upper and lower portions may comprise a rigid material which may be at least one material selected from the group consisting of plastic, glass, wood, and metal.

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The present invention is further a confectionery set comprising: a bottle shape comprising an upper portion and a lower portion, wherein the upper and lower portions are removeably attachable to each other; the upper portion comprises at least one stem and an item disposed thereon extending downward from the upper portion into the lower portion; and a flowable confectionery disposed within the lower portion. The stem may comprise a cylindrical or a rectangular body. The set may comprise more than one stem. Such stems may be arranged in an adjacent configuration. Stems may comprise at least one projection. Stems may further comprise sidewalls having apertures disposed therein or may comprise protruding sidewalls. Such protruding sidewalls may comprise channels disposed therebetween. The item of the set may be edible or non-edible.

A primary object of the present invention is to provide a confectionery product in the form of a soda pop bottle.

A primary advantage of the present invention is enhanced play value due to interactive features of the product.

Other objects, advantages and novel features, and further scope of applicability of the present invention will be set forth in part in the detailed description to follow; taken in conjunction with the accompanying drawings, and in part will become apparent to those skilled in the art upon examination of the following, or may be learned by practice of the invention. The objects and advantages of the invention may be realized and attained by means of the instrumentalities and combinations particularly pointed out in the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings, which are incorporated into and form a part of the specification, illustrate several embodiments of the present invention and, together with the description, serve to

explain the principles of the invention. The drawings are only for the purpose of illustrating a preferred embodiment of the invention and are not to be construed as limiting the invention. In the drawings:

Fig. 1 is a side view of a preferred embodiment of the present invention showing the confectionery set in a closed position;

Fig. 2 is a side transparent view of the Fig. 1 embodiment in an open position;

Fig. 3 is a bottom view of the top portion of the Fig. 1 embodiment;

Fig. 4 is a side transparent view of the alternate embodiment in an open position showing multiple grooves and ridges;

Fig. 5 is a side view of an upper portion with a candy stem insert; and

Fig. 6 is a side view of an upper portion with an alternate embodiment of a candy stem insert.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

(BEST MODES FOR CARRYING OUT THE INVENTION)

The present invention is a confectionery product in the shape of a soda pop bottle.

Several non-limiting embodiments of the container of the present invention are shown in the drawings. Fig. 1 is a side view of the preferred bottle-shaped container **100** of the present invention comprising an upper portion (also referred to as a reservoir) **102** and a lower portion (also referred to as a reservoir) **104**. Bottle container **100** is attachable and separable at a juncture between upper portion **102** and lower portion **104**. Lower portion **104** contains a flowable confectionery **103**, preferably a powder or liquid. A hard confectionery is attached to upper portion **104** and extends into lower

portion **104**. The hard confectionery is then wetted (e.g., licked) and dipped into the flowable confectionery **103**.

Bottle container **100** may further comprise a cap **120**. In the preferred embodiment, cap **120** is integral to upper portion **102** and does not open upper portion. Cap **120** may be of any configuration, such as shown, or other types of caps, such as metal crimped, and the like.

Fig. 2 shows a side view of container **100** in an open position (without stem and candy). A locking or flange mechanism **160** blocks upper and lower portions **102**, **104** together to form the soda bottle shape. A bottom view of flange mechanism **160** of upper portion **102** is shown in Fig. 3. As shown in Figs. 2-3, locking mechanism **160** extends from upper portion **102** and is substantially matched to an inner diameter of lower portion **104**. Insert **160** comprises a plurality of ridges: large ridges **164**, **164'**, **164"**, **164'''**, and small ridges **168**, **168'**, **168"**, **168'''**. A notch or space **165** separates each large ridge **164** from each small ridge **168**. Referring to Fig. 2, lower portion **104** comprises a plurality of grooves **172** for receiving ridges **164**, **168** of upper portion **102**. Each groove **172** further comprises a notch **173** and extended groove **174** that is cooperably positioned respectively with ridge **164**, notch **165** and ridge **168** of upper portion **102**. An approximate 30 degree to approximate 45 degree turn of lower portion **104** with respect to upper portion **102** sets ridge **168** of upper portion **102** into groove **173**; ridge **164** into groove **172**; and notch **165** into notch **173**. Upper portion **102** and lower portion **104** are unlocked by a simple turn in the opposite direction.

In an alternate embodiment as depicted in Fig. 4, two sets of large ridges **164**, **163** are position in parallel relation, and two sets of small ridges **168**, **169** are additionally correspondingly placed. As a result, corresponding deep groove **171**, with dual notches **173**, **175** and dual extended grooves **174**, **177**, are correspondingly positioned in parallel relation for receipt of dual large and small ridges **164**, **163**, **168**, **169**. This alternate embodiment is engaged for closure and release in the same manner as the preferred embodiment. In further alternate embodiments, additional grooves and corresponding notches may be utilized.

Fig. 5 is an expanded view of insert **360** with stem **364**. This insert **360** fits into upper portion **102** of bottle shaped container **100** (the lower portion is not shown in Fig. 4). Insert **360** may be integral with or separable from upper portion **102**. Stem **364** is used for attachment of a hard confectionery or coatable item (not shown) to dip into flowable confectionery **103**. Stem **364** may comprise a single cylindrical or rectangular unit as depicted in Fig. 5, or it may comprise multiple stems or stem **364** having one or more projections **366** or protruding side walls **368** for receipt of the candy as depicted in Fig. 6. These alternate embodiments may comprise adjacent protruding side walls comprising channels **370** disposed between the side walls, or side walls comprising apertures **372** for receipt of candy. Any number of side walls or protrusions may be utilized, including one, and may extend from a central cylinder or rectangular stem. This hard confectionery or item may be of any shape. The item may be edible or non-edible. The item is preferably coatable so that it can be licked by a user and then dipped into flowable confectionery **103** disposed in lower portion **104**, which then sticks to the item. The item is dipped into flowable confectionery **103** disposed within lower portion **104**, either before or after the user licks the item. In the preferred embodiment, the item is preferably an edible and coatable candy. The candy can be molded into the desired shape.

Upper and lower portions portion **102**, **104** are preferably made of a plastic material (e.g. injection or vacuum molded plastic), but can also be made of other materials, such as metal, glass, wood, and the like. Upper and lower portions **102**, **104** should be of a material that is easily held and attached by a user. In that regard, upper and lower portions **102**, **104** are preferably made of a rigid material.

Although a twist-type attachment is illustrated as the preferred closure in the drawings, the invention is not limited to this type of attachment. For example, upper portion **102** may be disposed on lower portion **104** by the following: screw-on attachment, molded lip/rim, snap on, clamp, form or friction fit, and the like. The invention is not limited to the particular twist attachment shown in the drawings.

In the preferred embodiment, as show in the drawings, upper portion **102** is attached to and directly above lower portion **104**. Stem **364** extends from upper portion **102** and may be disposed within lower portion **104**. Stem **364** cannot interfere with attachment of upper portion **102** to lower portion **104** and is therefore of a smaller diameter or width than upper and lower portions **102**, **104**.

The term "lower portion" as used throughout the specification and claims is intended to include a lower portion complimentary to upper portion. The examples shown in the drawings are of soda bottles or soda pop bottles that are cut in halves. However, the invention is not limited to soda bottles, but can be upper and lower portions of other bottles and items, e.g., a baseball bat. For instance, Fig. 5 is a bottle or baseball bat shape.

An alternative embodiment of the container is shown in Fig. 5.

Flowable confectionery **103** of the present invention comprises a flowable substance such as a liquid or a powder, or combination thereof. The confectionery is preferably a powder, and optionally may comprise a gas-generating, gas-releasing or "popping" type of powder. Confectionery **103** may also be a fluid or liquid, e.g. a viscous liquid.

Regarding the composition of confectioneries of the present invention, a hard candy portion (e.g., a candy attached to stem **364**) is preferably manufactured from, for example:

Sugar (from between approximately 55% and approximately 75% by weight);

Corn syrup (from between approximately 20% and approximately 40% by weight);

Water (from between approximately 1% and approximately 5% by weight);

Flavor agent (from between approximately 0.1% to approximately 2% by weight); and

Color agent (from approximately less than 1% by weight).

A candy powder portion (e.g., flowable confectionery **103**), is preferably manufactured from, for

5 example:

Sugar (from approximately 90% to approximately 98% by weight);

Malic Acid (from approximately 1% to approximately 6% by weight);

Flavor Agent (from approximately 1% to approximately 5% by weight);

Color Agent 9from approximately 0.1% to approximately 2% by weight); and

10 Flow Agent (from approximately 0.1% to approximately 5% by weight).

The flow agent comprises a substance that promotes flowability of the candy powder. Flow agents may comprise, but are not limited to, for example, powdered cellulose, magnesium stearate, stearic acid, paraffin and microcrystalline waxes, polyethylene waxes, mineral and other lubricating oils, talc, silicone dioxide, lactose, calcium citrate and the like. In general, flow agents reduce attractive and/or frictional forces between particles and/or absorb moisture. Flow agents are sometimes known as anti-caking agents and/or desiccating agents. Examples of useful flow agents include CAB-O-SIL® (Cabot Corporation, Boston, Massachusetts) and SYLOID® (W.R. Grace & Co., New York, New York).

20 Alternatives are given below where a hard candy portion is manufactured from ingredients in the following possible ranges:

Sugar (from approximately 0% to approximately 95% by weight);

Corn Syrup (from approximately 0% to approximately 80% by weight);

Water (from approximately 0% to approximately 50% by weight);

Flavor Agent (from approximately 0% to approximately 20% by weight); and

Color Agent (from approximately 0% to approximately 10% by weight).

Likewise, a candy powder portion may be manufactured from ingredients in the following

5 possible ranges:

Sugar (from approximately 0% to approximately 100% by weight);

Malic Acid (from approximately 0% to approximately 40% by weight);

Flavor Agent (from approximately 0% to approximately 20% by weight);

Color Agent (from approximately 0% to approximately 10% by weight); and

10 Flow Agent (from approximately 0% to approximately 5% by weight).

In an alternative embodiment, upper portion **102**, lower portion **104**, stem **364** or confectionery may be luminiferous in that they give off or transmit light. The term luminiferous encompasses, but is not limited to, luminescence, fluorescence, and phosphorescence. For example, a light source may be housed within upper portion **104**, lower portion **104**, insert **360** or stem **364**. In such an embodiment of the present invention, a light source comprises, for example, but is not limited to, a light bulb or a light emitting diode. Power for driving the source comprises, for example, but is not limited to battery power, mechanical-to-electrical energy power, and/or solar-to-electrical energy power.

20 The preceding examples can be repeated with similar success by substituting the generically or specifically described reactants and/or operating conditions of this invention for those used in the preceding examples.

25 Although the invention has been described in detail with particular reference to these preferred embodiments, other embodiments can achieve the same results. Variations and modifications of the present invention will be obvious to those skilled in the art and such variation and modifications are

covered in this disclosure to the extent that they are modifications and/or equivalents. The entire disclosures of all references, applications, patents, and publications cited above are hereby incorporated by reference.

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